REMARKS

Applicants have amended claims 1 and 15 to recite that each elongated well are vertically positioned in the conductive block. Support for this terminology can be found in Figure 1. Claim 25 has been amended to recite that the outlet passes through the removable sealing lid. Support for this terminology can be found in Figure 1.

Rejection of Claims and Transversal Thereof

In the November 29, 2004 Office Action:

claims 1-4, 6-8, 10, 12 -14 and 25 - 26 were rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under §103(a) as being obvious over Gudmundsen U.S. Patent No. 2,902,574;

claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gudmundsen in view of Tanabe et al. U.S. Patent Application Publication Number 2001/0008121 (hereinafter "Tanabe");

claims 11 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gudmundsen in view of Holloway U.S. Patent Number 3,647, 197 (hereinafter "Holloway").

These rejections are hereby traversed in respect of the pending claims, as amended herein, and reconsideration of the patentability of these claims is therefore requested in light of the following remarks.

Claims 1-4, 6-8, 10, 12 -14 and 25 - 26 were rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under §103(a) as being obvious over Gudmundsen U.S. Patent No. 2,902,574. Applicants respectfully traverse this rejection and submit that applicants' claimed invention, as amended herein, is not anticipated or rendered obvious by the cited reference.

Applicants have amended claim 1 to recite:

1. A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an

interior space within the thermally conductive block for accumulation of vapor, and wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, **and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block;**

means for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

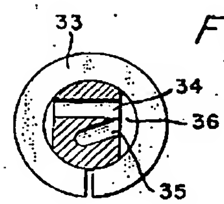
a removable sealing lid positioned on the top of the thermally conductive block for sealing the thermally conductive block and removable for ease of filling the elongated wells; and

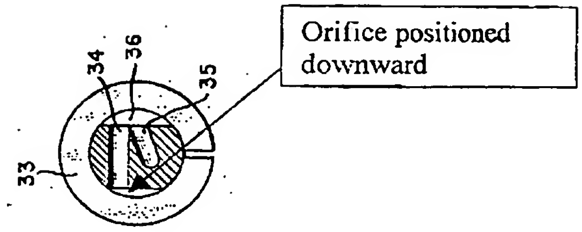
an outlet for discharge of vapor formed in the vaporizer communicatively connected to the removable sealing lid and the interior space.

The Gudmundsen reference describes a container that is used for holding and vaporizing source material. Importantly, as stated in column 1, lines 51 -52, one of the objects of the Gudmundsen invention is to provide a source from which a material to be evaporated will not drop prior to evaporation thereof. Further, it is important that the evaporated is directed in a predetermined direction. The container holding the material is described in Figure 4 as shown below and recreated for ease of discussion.

The container 21 described in Figure 4 includes orifice 34, cavities 35 and web 36, which separates the cavities from the orifice. The container is positioned above the deposition surface and is adjusted in such a manner that the orifice is disposed in a downward direction towards the semiconductor body. (see column 3, lines 60-61). As shown in Figure 4, the cavities that hold the material are always at an angle and not vertically positioned within the container. During the initial filing, the container is positioned so that the material can be included in the angled cavities and retained therein. As stated in Gudmundsen, during the evaporation process, the container is arranged so that the orifice is disposed in a downward position, as shown below.

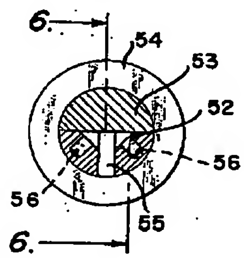
Fig. 4.





Clearly, when the container is positioned for filling and then for evaporation and deposition the cavities that are holding the material are not in a vertical position relative to the top surface of the tube container 21. This is also evident in the second embodiment as set forth in Figure 8, recreated below.

Fig. 8.



Cavities 52 are not vertically positioned in the container of Figure 8 and instead angled to provide access of the vapor to the orifice 55. (See column 4, lines 48-49) The orifice 55 is positioned so that the vapors are directed downward to the semiconductor surface.

Claim 25 has been amended as follows:

> "an outlet **positioned in the removable sealing lid** for discharge of vapor formed in the vaporizer in fluid communication with the interior space.

Thus, as shown in Figure 1 of the present invention, the outlet is positioned in the removable lid and the vapor from the interior space moves from the vaporizer through the outlet. Gudmundsen as shown above, does not provide for an orifice that passes through the sealing lid. Instead, the orifice is opposite from the sealing lid and vapors do not pass through the sealing lid. Thus, the Gudmundsen container does not anticipate applicants' claimed invention because anticipation under 35 U.S.C. § 102 requires the presence in a single reference of each and every element of the claimed invention,

PAGE 8/11 * RCVD AT 2/28/2005 9:39:03 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9194199354 * DURATION (mm-ss):04-00

arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added) The Gudmundsen does not meet this standard.

The Office further rejected claims 1-4, 6-8, 10, 12-14 and 25-26 under 35 U.S.C. §103(a) as obvious over Gudmundsen. Applicants traverse such a rejection and submit that to establish a *prima facie* case of obviousness, the Office must provide some suggestion in the prior art to motivate one skilled in the art to go in the direction of applicants. What is the asserted motivation put forth in Gudmundsen to position the cavities in a vertical position. Clearly, if the cavities were positioned in a vertical position then neither of the container embodiments would function as intended. For example, if the cavities, as described in Figure 4, are positioned in a vertical position, the orifice would not be disposed in a downward position to direct the vapors to the semiconductor surface, as required by the Gudmundsen reference. Likewise, if the cavities are positioned in a vertical position in Figure 8, the orifice will no longer be aligned for directing the vapors downward to the semiconductor surface. Further, neither the Office nor the cited reference provides any motivation to alter the placement of the Gudmundsen cavities.

Claim 25 of the present invention recites that "the outlet passes through the removable lid." In contrast, Gudmundsen teaches that the sealing lid is without any opening for passing the vapors therethrough. Instead, the vaporized material is directed through the orifice for deposition on the semiconductor surface. There is no suggestion or teaching in Gudmundsen to change the placement of the orifice and place it in the sealing lid. Clearly, if the orifice passed through the sealing lid of Figure 4, all the material would drop out of the cavities, which is exactly what Gudmundsen is attempting to avoid. It is the Office's responsibility to show or point out specifically some suggestion of teaching in the prior art to show the motivation to modify Gudmundsen and go in the direction of applicants' claimed invention. Applicants contend that any proposed modifications would only come from using applicants' disclosure as a blueprint, which is impermissible to establish a *prima facie* case of obviousness.

Accordingly, applicants respectfully request the withdrawal of the rejection of claims 1-4, 6-8, 10, 12-14 and 25-26 under §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Gudmundsen.

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gudmundsen in view of Tanabe. Applicants traverse such rejection and reiterate that Gudmundsen does not teach or suggest

applicants' claimed invention and that the addition of Tanabe does not cure the deficiencies in the Office's proposed combinations.

According to the Office, Tanabe describes the use of a thermocoupling to measure the temperature of a vaporizer for feedback control of the vaporizer temperature. The Office further states that it would have been obvious to one skilled in the art to use a thermocouple in the temperature controller of Gudmundsen, in view of Tanabe's teaching that a vaporizer temperature can be successfully controlled using a thermocouple. Applicants disagree and submit that the proposed combination dose not describe, teach or in any way suggest all the required of applicants' claimed invention.

The Tanabe reference describes a system with a single cavity **2** for placement of the evaporant wherein this single cavity can be wrapped with a resistive coil. This is in contrast to Gudmundsen who discloses multiple cavities that are open to the orifice for directly downward to the semiconductor surface. Applicants question whether the combination of Gudmundsen and Tanabe will form a system that includes multiple cavities as taught in Gudmundsen or will there be only one cavity as Tanabe teaches? Keeping in mind that the Office is not allowed to use applicants' claimed invention as a blueprint and then pick and choose only certain elements of the cited references while ignoring other elements. Thus, because Tanabe teaches one cavity and there is no structure for directing the vaporized material in any direction, how will the direction oriented Gudmundsen system interact with the cavity of Tanabe if these references are combined? Since there is no suggestion in either reference for such combination, the final components of the combined system and their respective placement is merely speculative.

Accordingly, applicants respectfully request the withdrawal of the rejection of claim 9 under 35 U.S.C. §103(a).

Claims 11 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gudmundsen in view of Holloway. According to the Office, "it would have been prima facie obvious to one skilled in the art to use this material for Gudmundsen's thermally conductive vaporizer, because Holloway teaches that aluminum can successfully be used to construct a vaporizer that requires thermal conductivity." As mentioned above, applicants have shown that Gudmundsen does not render applicants' claimed invention as obvious for multiple reasons. As such, the introduction of using aluminum from Holloway as the material of construction for a thermally conductive vaporizer of Gudmundsen does not overcome the deficiencies of the Gudmundsen system. Thus, combining

Gudmundsen with Holloway will not render applicants' claimed invention obvious. Accordingly, applicants respectfully request the withdrawal of the rejection of claims 11 and 28 under 35 U.S.C. §103(a) over Gudmundsen in view of Holloway.

CONCLUSION

Applicants have satisfied the requirements for patentability. All pending claims are free of the art and fully comply with the requirements of 35 U.S.C. §102 and §103. It therefore is requested that Examiner Bueker reconsider the patentability of claims 1-26 in light of the distinguishing remarks herein, and withdraw all rejections, thereby placing the application in condition for allowance. Notice of the same is earnestly solicited. In the event that any issues remain, Examiner Bueker is requested to contact the undersigned attorney at (919) 419-9350 to resolve same.

Respectfully submitted,

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